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Improving Sustainability Performance through Supplier Relationship Management in the Tobacco Industry

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Purpose – The purpose of this study is to explore how tobacco manufacturing companies can improve their sustainability performance via effective supplier relationship management (SRM).

Design/methodology/approach – This study has adopted a single case study of an international tobacco company. The primary data involved semi-structured interviews with participants from the case company who are familiar with sustainable SRM in the tobacco industry and are engaging in various techniques to improve sustainability performance.

Findings – The drivers for sustainable SRM commonly identified in literature are observable within the case company. There is also clear evidence of integrating sustainability in its SRM processes. However, the perception of sustainability as a requirement to meet stringent regulations limits its scope and drive in pursuing sustainable SRM. It has also limited supplier sustainability evaluation and performance metrics. Furthermore, our findings reinforce the importance of a procurement team's ability to work with other functional teams in implementing sustainable SRM. The findings also contribute to the emerging literature on the impact of sustainability on supplier segmentation and multi-tier supplier management.

Research Limitations/Implications – This study provides insight into the varying SRM methods used in the tobacco industry to ensure compliance and improve sustainability performance. However, further research is required to explore the generalisability of our findings derived from a single case study.

Originality/Value – The tobacco industry is an under-researched industry, particularly in terms of sustainable operations and supply chain management practices. Our findings seem to be relevant to those comparable industries with stringent regulations as well.

Keywords – Sustainability, supplier relationship management, sustainability risk management, tobacco industry

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1. Introduction

Nowadays, pressures from stakeholder groups, such as governments, customers, suppliers, employees, competitors, shareholders, non-governmental organisations and the community, have increasingly prompted companies to address the economic, environmental and social implications of not only their own operations but also their entire supply chain's (e.g. Kleindorfer *et al.*, 2005; Vachon and Klassen, 2006; Seuring and Müller, 2008; Hall and Matos, 2010; Sarkis *et al.*, 2010). As witnessed in Apple, Adidas, Mattel and Nike, companies have been held responsible for the unsustainable behaviour of their supply chain partners who may be scattered across the globe with different environmental, economic, social and legal standards (e.g. Seuring and Müller, 2008; Reuter *et al.*, 2010; Grimm *et al.*, 2014; Wilhelm *et al.*, 2016b). In response to this chain liability effect (Van Tulder *et al.*, 2009; Hartmann and Moeller, 2014), companies have to find ways to incorporate environmental and social aspects into their supply management (Koplin *et al.*, 2007). Not surprisingly, a company's sustainability performance is increasingly deemed to be dependent on its suppliers (Govindan *et al.*, 2013; Hofmann *et al.*, 2014). Krause *et al.* (2009) even asserted that a company is no more sustainable than the suppliers from which it sources. This has thus put supply management in a central position to achieve a company's sustainability objectives (Krause *et al.*, 2009; Reuter *et al.*, 2010; Miemczyk *et al.*, 2012; Gualandris *et al.*, 2014). However, our understanding of how

sustainability can be achieved via supply management is still at an early stage (Koplin *et al.*, 2007; Reuter *et al.*, 2010; Bové and Swartz, 2016). In a broader sense, while there is a general consensus that sustainability initiatives can lead to improved financial performance and a competitive advantage (e.g. Rao and Holt, 2005; Keating *et al.*, 2008; Lubin and Esty, 2010; Hart and Dowell, 2011; Wang and Sarkis, 2013), the implementation of sustainability initiatives in practice remains slower than desirable (Brockhaus *et al.*, 2013; Pagell and Shevchenko, 2014). Furthermore, Hassini *et al.* (2012) and Taticchi *et al.* (2013) have called for more industry-specific research on sustainable supply chain management (SSCM). Carter and Easton (2011) have also noted that researchers should carefully select individual industries with the goals of identifying specific types of sustainability activities that are germane to those industries. Against this background, this paper explores how tobacco manufacturing companies can improve their sustainability performance through supplier relationship management (SRM).

Tobacco is a major threat to public health and if current consumption patterns remain unchanged it will result in one billion deaths in the 21st century (Eriksen *et al.*, 2015). The tobacco industry is currently subjected to strict controls on advertising and increased tobacco taxes which have been facilitated by Article 6 of the World Health Organisation Framework Convention on Tobacco Control (Chaloupka *et al.*, 2010). Article 6 calls for countries that have legally signed and are bound to the Treaty to use tax and price policies on tobacco product to decrease its use. Sustainable operations and supply chain practices are crucial to tobacco companies as unsustainable practices further expose them to risks, sanctions and reputational damage in an already controversial industry. Tobacco companies have come under criticisms for using sustainability initiatives to improve their public image and influence the tobacco control agenda (McDaniel *et al.*, 2016). For example, there are accusations that companies have used green supply chains in an attempt to legitimise their portrayals of tobacco farming as socially and environmentally friendly, rather than taking meaningful steps to eliminate child labour and reduce deforestation in developing countries (Otanez and Glantz, 2011). Otanez and Glantz (2011) further noted that some tobacco companies have benefitted from \$1.2 billion in unpaid labour costs because of child labour and more than \$64 million annually in costs that would have been made to avoid tobacco-related deforestation in the top 12 tobacco growing developing countries, far exceeding the money they spend nominally working to change these practices. These issues necessitate the need for an effective SRM strategy to improve the company sustainability performance in globalised tobacco supply chains.

Given the above discussion, we pose the following research questions: (1). What is the primary motivation for tobacco companies to go for sustainable SRM? (2). To what extent are sustainability initiatives incorporated into a tobacco company's SRM processes? and (3). How can the tobacco company's SRM be improved for better sustainability performance? The remainder of this paper proceeds as follows: the relevant literature is first reviewed in Section 2. The research methodology adopted in this study is then presented in Section 3, while the research findings are provided in Section 4. This is followed by the discussion of the findings in Section 5. Section 6 concludes and draws some implications.

2. Literature Review

The tobacco industry is an under-researched sector in terms of sustainable operations and supply chain management. Therefore, it is necessary to consider a wider body of literature that identifies the key issues associated with the relationship between SRM and sustainability performance. This section is divided into four parts. It first provides some background on sustainable supply chain management mainly from a purchasing/supply management

perspective. The literature on the incorporation of sustainability into SRM is then reviewed. This is followed by a review of sustainable supplier performance management in SRM. Finally, the tobacco supply chain is discussed in particular with a focus on it being a unique research context for this study.

2.1 Sustainable Supply Chain Management

Sustainability came to the forefront of attention when the Brundtland Commission of the United Nations defined sustainable development as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (WCED, 1987). The way it is usually operationalised is through the triple bottom line (TBL) (Elkington, 1998), which includes economic, environmental and social perspectives. Following this logic, Seuring and Müller (2008) defined SSCM as “the management of material, information and capital flows as well as cooperation among companies along the supply chain while taking goals from all three dimensions of sustainable development, i.e. economic, environmental and social, into account which are derived from customer and stakeholder requirements” (p. 1700). Similarly, Carter and Rogers (2008) defined SSCM as “the strategic, transparent integration and achievement of an organisation’s social, environmental, and economic goals in the systemic coordination of key inter-organisational business processes for improving the long-term economic performance of the individual company and its supply chains” (p. 368). Building on the TBL performance, Kleindorfer *et al.* (2005) applied the term sustainability to supply chains by utilising and optimising resources from a broader perspective (i.e. the entire production system and post-production stewardship).

While different perspectives have been taken to define SSCM, Touboulic and Walker (2015) distinguished those adopting a procurement/purchasing perspective vs a supply chain perspective. They further noted that SSCM has emanated from the recognition of the strategic importance of purchasing and supply activities both in achieving the company’s long-term performance, and in addressing sustainability issues within business capabilities. Likewise, Walker and Jones (2012) defined SSCM as “the pursuit of sustainability objectives through the purchasing and supply process, incorporating social, economic and environmental elements” (p.15). In the context of the purchasing and supply function, the commonly cited drivers for adopting SSCM in literature include risk management (particularly vital for companies in a global economy), top management commitment, regulatory and institutional pressures, and supportive culture (e.g. Carter and Jennings, 2004; Pagell and Wu, 2009; Gattiker and Carter, 2010; Gimenez and Tachizawa, 2012). The literature also suggests that companies are implementing such SSCM practices as codes of conduct, standards, third party certification, supplier assessment/monitoring, supplier training/development, rewards and sanctions, and collaboration with suppliers (e.g. Pagell and Wu, 2009; Van Tulder *et al.*, 2009; Hassini *et al.*, 2012; Walker and Jones, 2012).

2.2 Incorporation of Sustainability into SRM

SRM has become a critical business process as a result of the increased offshoring and outsourcing of production and administrative processes. It can have a significant impact on meeting sustainability goals (Ashby *et al.*, 2012). SRM can be viewed as a means of influencing supplier behaviour and impacting the sustainability practices of the organisation by working with suppliers in activities such as reducing packaging, improving working conditions in warehouses, using more fuel-efficient transport, and requiring suppliers to undertake environmental and social programs (Carter and Rogers, 2008). In this context, the pursuit of sustainability is concerned with managing the balancing act of putting the TBL dimensions into supply management practices (Dabhilkar *et al.*, 2016), often along supplier selection, supplier

monitoring and evaluation, and supplier development (e.g. Reuter *et al.*, 2010; Miemczyk *et al.*, 2012; Leppelt *et al.*, 2013). However, social and environmental criteria are often in conflict with traditional objectives of supply management (e.g. costs, quality, flexibility, or short lead times) (Reuter *et al.*, 2012; Busse *et al.*, 2016). This is particularly relevant for the trade-off which purchasing professionals face between the potentially conflicting objectives of cost reduction and (supposedly costly) sustainable business practice in alignment with the non-economic goals of the organisation (Reuter *et al.*, 2012).

In the recent literature on the implications of sustainability for supply management practices, there has been increasing interest in the effectiveness of the traditional purchasing portfolio matrix (Kraljic, 1983) in the pursuit of sustainability (Krause *et al.*, 2009; Pagell *et al.*, 2010; Dabhilkar *et al.*, 2016). According to the Kraljic matrix, different types of supply relationships are required for different types of purchases or inputs. Four generic types of purchases (strategic, bottleneck, leverage and noncritical items) are proposed based on two dimensions: the strategic importance of the input on profitability and supply risk. Strategic items (with high profit impact and high supply risk) should be purchased from the suppliers with whom the buyer has long-term, close, and collaborative relationships. Supplier selection for these inputs should be based on total cost, rather than price. Bottleneck items (with low profit impact and high supply risk) should be sourced through one supplier with long-term contracts, to maintain supply continuity. Whenever feasible, the buyer should search for alternatives. Leverage items (with high profit impact and low supply risk) should be purchased based mainly on price and availability from multiple suppliers. The buyer does not invest in such a supplier relationship. Non-critical items (with low profit impact and low supply risk) should be purchased from multiple suppliers in a transaction-based manner based on price. Pagell *et al.* (2010) observed that a number of purchasing managers implementing sustainable supply management were not developing relationship strategies in the manner Kraljic suggested. For example, they found organisations buying leveraged commodities in a way that would be more appropriate for strategic suppliers. Dabhilkar *et al.* (2016) also revealed that sustainability development impacts supplier compliance in all Kraljic categories except for bottleneck items. Such variations reflect a new focus on the multiple dimensions of the TBL, instead of just on profits in the traditional Kraljic matrix.

The recent literature on SRM and sustainability has also focused on the issues beyond the focal company's direct suppliers. As the most serious environmental and social issues in the supply chain are often generated by suppliers located in the second tier or further upstream, also referred to as lower-tier suppliers (Tachizawa and Wong, 2014), this stream of literature investigates how focal companies can approach and manage their lower-tier suppliers (e.g. Grimm *et al.*, 2014; Tachizawa and Wong, 2014; Wilhelm *et al.*, 2016b). The buying company can directly approach lower-tier suppliers, to monitor, govern and collaborate with them (Mena *et al.*, 2013; Tachizawa and Wong, 2014). The main disadvantage of this approach is the increased managerial effort from the buying company (Mena *et al.*, 2013). Tachizawa and Wong (2014) further noted that companies following this direct approach tend to have more power and face higher stakeholder pressure. Among others, a challenging task particularly arises from the lack of contractual relationships between a buying company and its lower-tier suppliers (Choi and Linton, 2011; Grimm *et al.*, 2014). As a focal (buying) company is rarely powerful enough to orchestrate the entire supply chain, it can delegate the authority for managing lower-tier suppliers to the tier 1 supplier (Wilhelm *et al.*, 2016a). However, this is highly dependent on the tier 1 supplier's sustainability management capabilities. Wilhelm *et al.* (2016a) further revealed that tier 1 suppliers may attempt to acquire legitimacy to conform to the demands of their dominant buying company, while constrained by the access to resources

and the requisite expertise. This is more reminiscent of the concept of decoupling, where, in the quest for legitimacy, an organisation makes ceremonial or cosmetic changes in response to institutional pressure (Meyer and Rowan, 1977). Meyer and Rowan (1977) interpreted this decoupling as a company's protection of its technical core (e.g. management and technical practices, and measurements) from external demands for change. In support of this, Grosvold *et al.* (2014) found evidence that, in a bid to bolster their legitimacy, companies signal their commitment to sustainability without the associated changes to their actual supply chain practices they purport to comply with. Similarly, some tobacco companies have been accused of improving their public image by signalling their commitment to sustainability without the associated changes to their operations and supply chain practices to address the social and environmental issues (McDaniel *et al.*, 2016).

2.3 Sustainable Supplier Performance Management in SRM

Supplier performance management is a process to measure, analyse and report supplier performance (Lambert and Schwieterman, 2012), in an effort to gain more profits and drive continuous improvement. An important part of this process is to provide suppliers with evaluation feedback which clarifies the buyer's expectation and directs suppliers for further improvement (Krause *et al.*, 2000; Prajogo *et al.*, 2012). In meeting an organisation's TBL development objectives, supplier selection, supplier monitoring and evaluation, and supplier development are only feasible with related performance measurement and management tools (Gimenez and Tachizawa, 2012; Beske-Janssen *et al.*, 2015). Zimmer *et al.* (2016) stated that sustainable supplier selection, supplier monitoring and evaluation, and supplier development are although independent but interrelated core processes. Supplier selection is a key activity as choosing sustainable suppliers to collaborate with is critical to the successful implementation of sustainable SRM. It is crucial to focus on how sustainability has been integrated into supplier selection criteria, e.g. making ISO certifications and codes of conduct a prerequisite in supplier selection (Koplin *et al.*, 2007; Miemczyk *et al.*, 2012). These criteria serve for evaluations in the supplier selection process as well as the monitoring and development process (Zimmer *et al.*, 2016). To integrate environmental and social criteria into the selection process, information about the sustainability performances of suppliers must be gathered and evaluated (Koplin *et al.*, 2007). Sustainable supplier monitoring serves as a continuous assessment approach to observe suppliers' sustainability performance (Brammer *et al.*, 2011). The supplier monitoring and evaluations can serve as a basis for replacing non-compliant suppliers, as a trigger for supplier development activities, and/or as a means to continuously monitor the progress and success of development efforts (Zimmer *et al.*, 2016). The supplier development process is generally initiated by the evaluation of supplier performance and its underlying objective is to enhance the supplier's performance towards meeting respective requirements (Handfield *et al.*, 2000; Wagner and Krause, 2009). It also means evaluating the expected performance of potential development activities before the best activities will be selected for implementation.

It becomes clear from the above discussions that performance measurement is an integral part of the supplier selection, monitoring and development process. In addition to supplier performance measurement, the main activities for supplier development also include providing incentives for the supplier to improve, creating competition among suppliers, and working directly with suppliers through training programmes, and technical and managerial assistance, etc. (Handfield *et al.*, 2000; Krause *et al.*, 2000; Wagner and Krause, 2009). When supplier performance falls below the required metrics, the buying company can change to a more capable supplier or help improve the existing supplier's capabilities (Handfield *et al.*, 2000). In terms of sustainable development, supplier development is preferable to the termination of suppliers in case of improvable sustainability performance. It may be difficult to improve the

local economic, social and environmental conditions at the supplier sites by way of switching to another supplier. A second reason for preferring supplier development compared to termination is that trickle-down effects (Holt, 2004; Zhu *et al.*, 2008) can be provoked if the tier 1 supplier takes up the role of managing the sustainability performances of lower-tier suppliers for the focal (buying) company (Wilhelm *et al.*, 2016a). According to Vachon and Klassen (2006), collaborations which are a result of supplier development strategies can replace or at least reduce auditing and monitoring activities thereby reducing costs. The ability to form collaborative relationships with suppliers to improve sustainability has even been deemed to be a valuable asset that results in a sustainable advantage in making responsible and profitable supply chains (Pagell *et al.*, 2010; Gimenez and Sierra, 2013). However, long-term and collaborative relationships between firms and their stakeholders are achieved by building trust and commitment (Gimenez and Tachizawa 2012).

2.4 Tobacco Supply Chain

Otanez and Glantz (2011) described the tobacco supply chain as comprising of companies engaged in seed and crop science, tobacco growing, harvesting, leaf selling, transport, storage, ingredient supply, cigarette manufacturing and retailing and can thus be categorised into (a) Leaf and (b) Non-leaf tobacco supply chain. An illicit tobacco market also exists in addition to the legitimate tobacco supply chain which cost governments an estimated \$40-50 billion in lost revenue in 2006 (Joossens and Raw, 2008) and poses serious health risk to the public because it makes tobacco available at a cheaper cost. Increasing evidence has indicated that the legitimate tobacco industry is directly or indirectly involved in facilitating large-scale organised smuggling by exporting tobacco with duty unpaid to countries with no demand for them or oversupplying countries for their products to be smuggled back into high-price markets (Joossens and Raw, 2012). Other forms of illegal tobacco supply include bootlegging and the counterfeit trade. However, large-scale smuggling of genuine brands has decreased by interrupting the supply chain from the manufacturers to the illicit market by implementing anti-smuggling measures which include increased punishment, prominent fiscal marks on packs, more customs officers, threat of legal or punitive action and parliamentary hearings that expose and change tobacco industry practices. The proportion of counterfeit cigarettes has increased and accounts for a quarter of the smuggled cigarette market (Joossens and Raw, 2008).

With respect to supply chain management, Datta (2017) reported on how a tobacco company in India has enhanced competitive advantage by re-configuring its leaf tobacco supply chain. The company has also been actively engaging with growers and collaborating with key public institutions towards deployment of high yielding varieties, upgrading crop growing and curing practices and post-harvest product management technologies. While this has facilitated extensive farmer training campaigns on agricultural best practices and sustainable agriculture, and customised growing programmes for air-cured tobacco varieties, the focus of that study is on the reduction of production costs of a higher variety of leafs, and the launch of newer brands of cigarettes with different flavours of tobacco leaf. In terms of sustainability, Montabon *et al.* (2016) argued that, given the social harm in the form of health outcomes that tobacco products cause, it would be difficult to classify tobacco supply chains as sustainable if customer demand is considered in conjunction with environmental and social concerns. Nevertheless, two supply chain issues have been commonly addressed by tobacco companies (McDaniel *et al.*, 2016), namely child labour and the environmental impact of tobacco growing. It has been documented that tobacco companies' efforts to green their supply chains started in the 2000s (Otanez and Glantz, 2011). They have also commonly claimed their support for or promotion of sustainable agricultural practices among farmers (e.g., soil mulching, water conservation, and pesticide minimisation), and their financial support for reforestation programmes that replace trees cut

down and used for fuel in curing tobacco leaves. However, it is argued that tobacco companies rely on such claims, as well as other tobacco industry corporate social responsibility initiatives, to improve their public image and influence the tobacco control agenda (McDaniel *et al.*, 2016).

In summary, we have reviewed the literature on SSCM, the incorporation of sustainability into SRM, and sustainable supplier performance management in SRM. It is important to point out that both the motivation and implementation of sustainable supply management are influenced by the nature of the companies' business, and the type of industry that the companies are in (e.g. Ageron *et al.*, 2012; Schneider and Wallenburg, 2012; Tachizawa and Wong, 2014). Our literature review also indicates that tobacco companies are not in the sustainability business as it is becoming commonplace now across various industries and throughout academic research (Palazzo and Richter, 2005). The tobacco industry thus provides a unique research context for the study of the relationship between SRM and sustainability performance.

3. Research Methodology

To investigate the motivation for sustainable SRM in the tobacco industry, the integration of sustainability into a tobacco company's SRM processes, and how the relationship between the tobacco manufacturing companies and their suppliers could be improved for better sustainability performance, a single case study was used in this study. According to Yin (2013), case studies are selected and preferred, when "how" or "why" questions are being posed. The case company, with its headquarters located in Europe, is a global tobacco company. It is important to note that the tobacco industry is an oligopoly, where several major companies represent 80% of the global market share. In this sector which is subject to stringent regulations, regulatory drivers have largely shaped the organisation and operations of sustainability initiatives, resulting in similar procedures towards sustainability initiatives at the industry level (Otanez and Glantz, 2011). In this context, we believe that the case company, one of the major tobacco companies dominating the global tobacco industry, is typical for the tobacco industry. As its reliance on suppliers rises, the company focuses on ensuring that there are strong plans to guarantee security of supply, contingency scenarios, ongoing sustainability, and responsible work practices. The role of SRM falls in its procurement department. We collected qualitative data directly from 13 managers in the case company (see Table 1) who are well informed of the supply management processes and the implication of supplier relationships on its sustainability performance. The participants were determined using a purposive sampling technique as it allowed the researchers to use judgement to select subjects that would best assist in answering the research questions and meet the research objectives (Saunders *et al.*, 2012). They were also selected across the tobacco leaf and non-leaf supply chains and a broader category of direct and indirect procurement.

The majority of the participants (11 out of 13) are from the procurement department. Their roles cover various aspects of supplier selection, supplier monitoring and supplier development in pursuit of sustainability initiatives. The case company is also committed to cooperating with suppliers in developing sustainable practices, in order to match its strategy with the purchasing/sourcing function, and encourage innovation in new product development and add value to the case company. The two other participants (i.e. a senior international sustainability manager and the group head of new product introduction deployment) were thus sought as they were well informed of sustainability and new product development strategies within the case company respectively. The interviews took approximately 75 minutes on average and were conducted in a semi-structured manner, in order to understand the views of professionals in the tobacco industry, identify the gaps between operational practice and current sustainable SRM literature, explore the relationship between the case company and its suppliers in terms of

sustainability performance, and seek how tobacco companies can collaborate more with suppliers for improved sustainability performance. In addition to the use of interviews derived from a comprehensive review of literature, other sources of evidence or data include documents in the form of sustainability reports, supplier codes of conduct, farmers' livelihood report and the case study company's website.

[Insert Table 1 about here]

We adopted a thematic analytic method in analysing data, and organizing and displaying our findings. Thematic analysis is a method of identifying, analysing and reporting patterns within data and goes further to interpret various aspects of the research topic (Boyatzis, 1998). For this research, the thematic analysis involved searching across interview transcripts, and a range of case company documents to find repeated patterns of meanings and issues of potential interest. The themes selected for analysis are strongly linked to data themselves (Patton, 2015) and represent a rich description of the data set, based on their prevalence across our data and importance to the research questions.

4. Data Analysis

In the course of the data analysis based on thematic analysis and through the review of extant literature, we have attempted to answer the research questions regarding the motivation for sustainable SRM, the SRM processes (including supplier sustainability performance management) adopted to implement sustainability initiatives, and the improvement of sustainability performance through SRM. In this section, our findings are orchestrated in the logical flow that practitioners associate with these topics, supported by original quotes from the respondents. The respondents argued extensively that managing supplier relationships has enormously contributed to the case company's sustainability performance by assessing supplier sustainability risk, managing supplier sustainability performance, managing relationships beyond tier 1 and training and developing suppliers. Table 2 summarises the main opinions of participants classified by themes. The four main themes were identified: (1) Perceptions and motivation of sustainability initiatives in SRM; (2) Supplier segmentation and multi-tier supplier management in pursuit of sustainability; (3) Sustainability performance management in SRM; and (4) Supplier development for sustainability performance improvement.

[Insert Table 2 about here]

4.1 Perception and motivation of sustainability initiatives in SRM

In line with the literature, the participants emphasised that incorporating sustainable supply chain practices has become critical to the tobacco industry due to increasing interest and pressure from stakeholders, such as policy makers and non-governmental organisations. In addition to these factors, participants indicated that the controversial nature of the industry, which is characterised by heavy sanctions and taxes, has also encouraged tobacco supply chains to be more sustainable. Although not fully explored in our literature review but was of profound essence during the thematic analysis, respondents pointed out that they have been able to mitigate supplier sustainability risk by incorporating rigorous supplier selection processes. This supports the literature (e.g. Foerstl *et al.*, 2010; Dai and Blackhurst, 2012), demonstrating that purchasing and supply management are the key functions for preventing reputational damage

from suppliers. Seuring and Müller (2008) also proposed supplier management for risks and performance, where emphasis is placed on avoiding risk from suppliers with poor sustainability performance. The selection processes help in ensuring that only sustainable suppliers are selected into its supplier base. As stated by one of the respondents:

“When we meet a supplier for the first time we will go through a series of evaluations... and we will go through a number of evaluation dimensions to ensure that the supplier is fit for purpose. As a result of that it could take about up to 6 months to bring a supplier into the business...Going through this, we guarantee reducing costs besides the sustainability benefits, because, if somebody like a journalist finds out about this, to deal with a high-risk supplier, we will be required to find a new supplier, which will increase costs.”

Respondents argued that a supplier selection process which focused on not only price has the benefit of eliminating supplier sustainability risk and ensuring a matured sustainable supply base to collaborate with. The stringent supplier selection process demands that suppliers must meet the numerous evaluation criteria of the focal company that consist of the Sustainable Tobacco Programme (STP) for suppliers of tobacco leaf and Survey Tool for non-leaf suppliers. These programmes include sustainability criteria covering areas such as environment, labour standards and human rights. The case company assesses the risks along four dimensions, namely supply (e.g. the damage that non-compliant suppliers can do to the company's reputation), legal (such as tax aversion), reputational, and financial risks. It also prioritises high-risk countries where the company may be more likely to face risk factors. The case company also subscribes to a third party company, which provides different risk dimensions for it to appraise, such as human risk and political risk. This is in line with the literature. For example, Reuter *et al.* (2010) revealed that the focal company's perceived risk of non-compliance to sustainability standards is strongly attributed to the geographic locations of suppliers, upon which it places high emphasis in its determination of where to concentrate its SRM efforts.

Under the constant scrutiny of public attention, it comes no surprise that the case company has a scheme in place to eliminate child labour and minimise its negative impact on the environment. For example, it financially supports sustainable agricultural practices among farmers and reforestation programs. These have also been reflected in implementing protocols for the WHO Framework Convention on Tobacco Control to regulate the companies' practices at a farm level (Otanez and Glantz, 2011). Furthermore, the case company's green initiatives in SRM have been evident in the following quotes:

“We are adjusting in a green agenda. We are interested in it because it is a good business practice. If a company, e.g. in Brazil, is chopping the rainforest down, then we cannot rely on it as a source of pop in the future, as it is unsustainable for a business. The green agenda is now integrated into the whole risk management process, where sustainability is about protecting the business.”

“We buy a lot of carton board, as we put our products into carton board boxes. We buy many thousands and thousands of tonnes of carton board which come from pop, which is sourced from trees. If the supplier we are working with is doing the right things, the forest and the trees that are cut down are treated as a renewable resource. We look for such suppliers who are treating their products as sustainable.”

It is worthy of note to mention that, although the tobacco industry enjoys top management commitment in its sustainable supplier management practices, the ability to effectively assess

supplier sustainability risk and collaborate with suppliers in innovating and developing norm-breaking sustainable practices beyond stakeholders' requirements, standards or the focal company's code of conduct is still highly influenced and affected by the perception or motivation of the supply management function. In the tobacco industry, a sector subject to stringent regulations, the motivation to implement sustainable supply chain practices is primarily from pressure of stakeholders which limits supplier selection processes to selecting suppliers who meet the selection criteria, and limits supply management sustainability efforts to benchmark standards or code of conduct (not necessarily exceeding these standards to encourage innovations and value addition). This is reflected in one respondent's comments below:

"It's more of the minimal standard to play the game, you need to have it. I guess it depends on the industry...but being in the tobacco industry no one would tap us on the back for being sustainable...it's not the focus, but if we don't have it, it would be really really bad. Therefore, we need to have it to be a responsible company. We are not in the same game as chocolate companies, where we go, we have a super green supply chain for chocolate...no one would buy tobacco because it's green but it doesn't mean we should not do it."

4.2 Supplier segmentation and multi-tier supplier management in pursuit of sustainability

Respondents pointed out that supplier segmentation was crucial in ensuring supplier performance and effectively managing the large tobacco supply base. The case company develops a supplier management strategy through supplier segmentation. More specifically, suppliers are categorised into four main categories i.e. strategic, core, performance managed and transactional suppliers based on spend, risk and criticality to business, which is in line with Lambert and Schwieterman's (2012) supplier segmentation in the SRM process. In relating to Sharif *et al.*'s (2013) approach of focusing SRM strategies on suppliers further up the supply chain, joint partnerships and collaborations are focused on strategic and core suppliers who have the R&D capabilities to jointly innovate with the focal company as commented by one of the respondents:

"We will work with the strategic suppliers more closely and this is more about product development and joint product. Then all the other suppliers could be more of performance-managed suppliers because obviously they may not have the R&D capability or infrastructure to support us going forward. So I have segmented my suppliers between strategic or core or non-core or performance suppliers, and that segmentation process is reviewed every year and any changes are communicated downwards."

Additionally, the case company works collaboratively with strategic suppliers who form about 5% of the total supply base to jointly develop business plans, and meet constantly to ensure compliance with changing regulations including sustainability requirements and KPIs to push delivery. Due to the importance of strategic suppliers, the case company implements a complete matrix in evaluating and ranking suppliers as strategic. This category is reviewed annually while other categories of suppliers are managed based on performance and price. Participants also commented on the importance of collaborating with strategic suppliers by holding strategic and operational meetings with them for discussions focused around improving performance, development of agreements to share consumer insights, and tapping into suppliers' innovations to develop new products. Contract management meetings are held with performance suppliers once or twice a year to track performance indicators.

It is worthy of note that supplier relationships are developed with only tier 1 strategic suppliers in indirect procurement (i.e. materials not going into the final product) and the case company relies on tier 1 suppliers to cascade its standards and procedures which include sustainability standards for suppliers further down the supply chain. This corroborates Wilhelm *et al.*'s (2016a) agency theory approach where the tier 1 supplier takes up a double agent role with the responsibility to act as an agent toward the lead company when implementing sustainability in its own operations. However, in direct procurement (i.e. materials procured for the final product) direct sustainable supplier relationships are sometimes built with suppliers beyond tier 1 where the tier 2 or tier 3 supplier is strategic or is regarded as high risk as pointed out by one of the respondents:

"In western Europe, we ensure we have traceability all the way back to the primary producer of any component of any product materials in strategic cases. Sometimes we work with tier 3 suppliers in strategic cases like flavour producers for capsules."

For the Next Generation Products (NGPs), including E-cigarettes and tobacco heating devices, lower-tier suppliers such as tier 2 and tier 3, are appraised directly by the case company, due to the critical components involved, particularly in batteries where there is lithium. One respondent stated:

"Within the Next Generation Products, for example, E-cigarette products, we have a plan for monitoring supplier performance going further beyond the tier 1 suppliers because of the complexity of the products compared to normal cigarettes."

However, the leaf supply chain of the tobacco industry has a slightly more matured SRM approach compared to the non-leaf supply chain. In the leaf supply chain, the company sources and has direct relationships with 90,000 contracted farmers who represent 70% of its leaf suppliers. Its leaf managers, who work at the operating company or local company level, provide agronomy support, engage communities, agree contracts, supply seed, and offer advice on propagation, the safe and sustainable use of agrochemicals and integrated pest management. The matured SRM is reflected in the following quote:

"Leaf technicians also advise on techniques that help protect the environment, from reducing water demand through efficient irrigation, to managing biodiversity and preserving natural forests. The agronomy support also covers areas of agricultural practice other than just tobacco farming. Our technicians provide farmers with advice about how to improve the quality and yield of food crops, making them more self-sufficient. While the support we provide our contracted farmers undoubtedly brings advantages to our business in terms of access to high quality tobacco leaf, it also plays a significant role in improving local environments and livelihoods and in helping mitigate and reduce the impacts tobacco growing may have."

The remaining 30% of leaf is sourced from tier 1 suppliers who source from numerous farmers and maintain relationships with these farmers while cascading the focal company's standards and code of conduct down the supply chain.

4.3 Sustainability performance management in SRM

Regarding evaluating supplier sustainability performance and providing feedback, participants pointed out that performance of suppliers is managed through assessment and collaboration, which is in line with Gimenez and Tachizawa (2012). The participants indicated that, apart from the stringent supplier selection process, suppliers are assessed using a survey tool, annual

self-assessments and on-site reviews. However, suppliers are revisited based on the ratings of audits: high-scoring suppliers are reviewed after 4 years while low-scoring suppliers are revisited more frequently and, as part of the process, suppliers are given feedback and guidelines or an action plan for continuous improvement. When the results of the self-assessment are unsatisfactory, the case company may request access to the supplier's factory. In the most serious cases, where compliance appears to be a real issue, it will send a third party auditor to inspect the supplier more intensively.

Although traceability is not investigated in the literature review, it is an essential part of the thematic analysis. One of the respondents pointed out that everything, from the plastic cord used in wrapping cigarette packets, to the chemicals used, must be traceable to their origins by requesting certificates for all chemicals used, and information on tier 2 suppliers. Furthermore, a traceability test is applied, inspecting all manufacturing resources, such as working conditions and employees' rights. This concurs with Rábade and Alfaro's (2006) characterisation of traceability as an essential procedure to avoid customer hazards, and a vital process through which to guarantee quality in SRM.

Respondents pointed out that supplier performance evaluations gave the supply chain visibility in proactively assessing supplier sustainability risk and developing a mitigation strategy in collaboration with the supplier. One of the challenges within supplier performance management, identified by Cheng and Carrillo (2012), is the lack of quality or timely information. The lack of information is also a common barrier to sustainable supply management (Crespin-Mazet and Dontenwill, 2012; Zailani *et al.*, 2012). The case company overcomes this challenge by considering supplier evaluation also as a function of the quality management department, separate from procurement, involving communication between those dedicated to quality management, on behalf of both the supplier and the focal company. As stated by one of the respondents:

"We would like our quality people and suppliers' quality people to talk to each other, and they do not need to come through us, through procurement. We try to make sure that there is functional communication and they know each other, and the only way we are involved is when there is an issue, e.g. suppliers do not talk or respond... We step in and there will be some kind of formal review that is not particularly good. We will have special kinds of review meeting. So, we have a kind of escalation point, and quality has a separate function in our company."

Most respondents however pointed to the absence of sustainable supply chain key performance indicators, incentives or sustainability targets in contracts as proposed by Bai and Sarkis (2014) in measuring performance. Supplier performance is measured against the ability to meet the supplier code of conduct criteria through audits, site visits and self-assessments. One respondent commented:

"We have something called 'business principles of conduct'. We are in a controversial industry so we hit newspapers a lot for some of the wrong reasons. So, we cannot afford to have this sort of thing happening to us; so, we are very, very tight on this kind of thing."

The case company justifies the lack of sustainability KPIs as increasing the complexity and cost of managing suppliers as stated by one of the respondents:

"There is no global process to actually collect this information, and if you want to do that, the cost of doing so would be absolutely massive. Therefore, the business has taken a decision that,

as part of the selection criteria, we really focus on that, and within the contract, therefore the supplier has to be compliant to the policy and if there is a breach to the policy, there is a remedy we can take.”

Regarding sustainability reporting and monitoring, respondents pointed out that the case company has implemented a mixed approach of collecting sustainability performance information in corroboration with Tachizawa and Wong (2014). It directly collects information using self-assessments, survey tools and audits, and indirectly collects information using tier 1 suppliers in the leaf supplier chain where tier 1 suppliers include, as part of their assessment, the sustainability performance reports of lower-tier suppliers and also with regard to strategic lower-tier suppliers like flavour houses.

On the other hand, the tobacco leaf supply chain has a more robust performance management approach similar to the Assessment of Sustainability in Supply Chains (ASSC) framework (Schöggl *et al.*, 2016) by incorporating the STP. STP is an industry initiative and applies to all major global tobacco manufacturers and suppliers. It has 178 criteria covering 5 key sections of Crop, Environment, People, Facilities and Governance. The assessment process is done through an online tool managed by the independent consultancy and the tool enables the monitoring of an individual supplier's performance, as well as comparisons across types of suppliers, geographical regions, tobacco crop types and specific criteria.

In conclusion, the non-leaf supplier sustainability performance is assessed against the case company's standards and codes of conduct, while the leaf supplier performance is assessed against industry wide standards and potential new suppliers assessed based on the supplier selection criteria to prevent non-compliant suppliers from entering the supply base.

4.4 Supplier development for sustainability performance improvement

The development of suppliers in terms of sustainability is often triggered from performance evaluation results. Respondents pointed out that supplier development programmes for all suppliers on sustainability would be a humongous task with severe cost implications, and it is limited to strategic and core supplier segments. The process of development is about mentoring and coaching, rather than imposing an actual training process. The literature has linked supplier development to sustainability via mentoring and coaching (Rao and Holt, 2005). For the case company, this is for ensuring an effective supplier selection process is in place to guarantee a sustainable supply base that meets the company's sustainability standards and changes to policy are constantly cascaded as explained in the respondents' comments below:

“We have a philosophy of continuous improvement, so we have experts in our business that can help our suppliers to improve. We cannot do that for everybody; it is for the strategic and core suppliers... We will definitely work with strategic suppliers to help them improve. So, it is not necessarily a training thing. It is more about coaching; for example, painting lines on the floor.”

“We don't have a training course particularly for sustainability because it's such a wide topic; we would validate the supplier to ensure they are fit for purpose, but from a sustainability perspective we do not train them; we expect them to be operating at that level or we won't work with them.”

The respondents further expatiated that the training of suppliers is also carried out in continuous contract management approach aimed at improving the suppliers' performance when deficient

or when performance is below metrics, which is well described by the comment of one of the respondents below:

“When we do the internal risk assessment, the best evaluation and then the 3rd party supplier evaluation we put an action plan behind it to see if there are any gaps versus criteria and then those action plans are regularly monitored and updated in terms of making sure the suppliers are working towards those gaps.”

With regards to sustainability elements within supplier development, respondents noted that they strive to ensure that their company only works with suppliers that comply with the changing policies and regulations, e.g. on modern slavery and the criminal finances. They also consider Environmental Health and Safety (EHS) as vital, ensuring that suppliers benefit from its EHS programme. One respondent commented:

“There are some of the areas around EHS in parts of the world where we have difficult operating environments so, like in Asia, we believe in our factories. We have world-class EHS processes. We like to make sure that suppliers can benefit from learning. As a procurement function, locally, we will ask the local EHS guy to come along with us to investigate how the suppliers are doing.”

Additionally, non-compliant suppliers are replaced or delisted only after development measures have been exhausted. Wilhelm *et al.* (2016a) also stated that, when delegating the authority for managing lower-suppliers to tier 1 suppliers, the focal company should make investments to build up additional capabilities for tier 1 suppliers, rather than completely delisting non-compliant suppliers. Some respondents further pointed out that the development of suppliers is also carried out using a SRM approach through operational and strategic meetings where suppliers are updated on new policies and requirements of the case company:

“Yes we meet quarterly with the global account manager. Technically, my program would consist of 12 meeting slots with the supplier, and out of those 12, 4 would be face to face.”

The tobacco leaf supply chain has a more robust supplier development strategy for leaf suppliers. It includes training and incentives such as providing free technical advice, support and training on agricultural best practice via its specialist leaf technicians, access to new farming technologies (such as drip irrigation), and providing free training and workshops on best practice sustainable agriculture approaches and new initiatives for tier 1 leaf suppliers.

5. Discussion

This research aimed to understand how the tobacco industry can improve its sustainability performance through an effective SRM strategy. Firstly, our findings are in line with the literature, suggesting that, to achieve successful sustainable SRM, supplier selection criteria should not only be focused on the traditional economic criteria of price, delivery, flexibility and service but also include all aspects of the TBL (e.g. Jimenez and Lorente, 2001; Zimmer *et al.*, 2016). The tobacco company has also shown high commitment from its top management and internal willingness to manage supplier sustainability risks before they are exposed publicly. This is in support of Roehrich *et al.* (2014), who argued that a company’s decision to implement SSCM practices and manage these are contingent upon its reputational risk exposure, and called for further research to investigate the use of supplier selection as a way to reduce reputational risk. Given the controversial nature of the tobacco product, our findings demonstrate that the case company (1) implements the stringent supplier selection process

during which suppliers must meet numerous evaluation criteria; and (2) subscribes to a third party company, which provides different risk dimensions for the case company to appraise.

Secondly, all participants in this study perceive sustainability as a requirement to meet the stringent regulations of the tobacco industry, thus limiting their scope and drive in pursuing sustainable relationships with suppliers. In such a sustainability initiative, the main motivation for a supplier to engage the sustainability implementation is generally not to improve its own sustainability performance, but to comply with the buyer's requirement (Brockhaus *et al.*, 2013). It has also been acknowledged in the literature that, when companies' sustainability initiatives are driven primarily by legislative and political pressures, they are less likely to achieve profit and garner competitive advantages (Kiron *et al.*, 2013; Pagell and Shevchenko, 2014). Therefore, there is a need to re-orientate the supply management professions to drive further supplier relationships to improve sustainability performance beyond the norm for both the focal company and its suppliers.

Thirdly, the case company manages the large tobacco supply base through supplier segmentation. It works collaboratively with its strategic suppliers in indirect procurement and relies on them to cascade its standards and procedures to lower-tier suppliers. This is in line with the literature, proposing that the buyer can delegate the authority for managing lower-tier suppliers to the tier 1 supplier (Choi and Hong, 2002; Wilhelm *et al.*, 2016a). However, in direct procurement, direct sustainable supplier relationships are sometimes built with suppliers beyond tier 1 where the tier 2 or tier 3 supplier is strategic or is regarded as high risk. For the NGPs, lower-tier suppliers are appraised directly by the case company, due to the critical components involved, particularly in batteries where there is lithium. This direct approach to accessing and managing lower-tier suppliers may be explained by the fact that the role of tobacco manufacturers (owing to their powerful position) has been a coercive force for sustainability initiatives in the tobacco industry (Tachizawa and Wong, 2014), which is subject to stringent regulations.

Fourthly, we found evidence that supplier performance evaluations facilitate the supply chain visibility in proactively managing supplier sustainability risk. This is in line with Pagell and Wu (2009), who argued that managers of sustainable chains will focus on sourcing side activities such as supplier certification, including social and environmental criteria in supplier selection, and ensuring the traceability of physical flows through the entire chain. To gain quality and timely information about its suppliers, the case company has integrated supplier evaluation to the function of the quality management department. This inter-functional integration of procurement and quality management complements the literature on the production-marketing integration as an SSCM practice (Pagell and Shevchenko, 2014; Foerstl *et al.*, 2015). In addition, the relationship management and performance management approaches presented in the literature review are mainly applied in the leaf supply chain alone, which elaborates the fact that the tobacco supply chain has focused its sustainability efforts on suppliers where risks were most expected and on those that would have the greatest damage to the organisation's brand. This could be termed as a strategic approach to sustainable SRM but exposes tobacco supply chains to sustainability risk from other suppliers such as paper, packaging and filter tip suppliers.

Finally, this research reveals that the case company has limited supplier sustainability evaluation and performance metrics to the minimum acceptable standard, thus not encouraging suppliers to make norm-breaking sustainable efforts. This is further compounded by not acknowledging the sustainability performance of suppliers by not providing rewards or

excluding incentives in contracts for specific sustainability performances. Providing suppliers with awards and incentives for improved performances is a key enabler of supplier development efforts (Krause *et al.*, 2000; Koplin *et al.*, 2007). It has been commonly observed in other industry sectors (Bové and Swartz, 2016). For example, as an incentive for Walmart's suppliers to participate, those suppliers with the highest Sustainability Index scores have their products tagged as "made by Sustainability Leaders" on Walmart's website. Likewise, with the International Finance Corporation, Levi Strauss established its \$500 million Global Trade Supplier Finance program to provide low-interest short-term financing to those that rate highly on Levi's own sustainability scorecard for suppliers. Nevertheless, it is encouraging to note that several interviewees in our study mentioned that they have planned to address this, as one stated "We do not give awards to suppliers for good sustainability performance but it is in our future plans".

6. Conclusions, limitations and further research

The implementation of sustainable operations and supply chain management practices is contingent on industry and product characteristics. In response to calls for more industry-specific research on SSCM (Carter and Easton, 2011; Hassini *et al.*, 2012; Taticchi *et al.*, 2013), this study has investigated the relationship between the tobacco focal company and its suppliers and how such a relationship can be improved for better sustainability performance. In line with the literature, a number of drivers for sustainable SRM practices are observable within the case company, including response to regulatory requirements, high top management commitment and reputational risk exposure. This is further enforced by the controversial nature of the industry, which is characterised by heavy sanctions and taxes. However, the perception of sustainability as a requirement to meet the stringent industry regulations has been found to limit its scope and drive in pursuing sustainable SRM, i.e. meeting a minimum standard. This research also reveals that the case company has limited supplier sustainability evaluation and performance metrics, e.g. due to cost implications of implementing such approaches. On the other hand, we have found clear evidence of the case company integrating sustainability initiatives in its SRM processes, including its stringent supplier selection processes, prioritising sustainability efforts with those suppliers in high-risk regions, working with third party organisations in the evaluation of suppliers, and supplier development. To gain quality and timely information about its suppliers, the case company has also integrated supplier evaluation to the function of the quality management department. This reinforces the role of a procurement team's ability to work with other areas of the company in the implementation of sustainable SRM. Our findings also contribute to the emerging literature on the impact of sustainability-initiated supplier segmentation and multi-tier supplier management specifically in a new (tobacco) industry setting.

This study has important managerial implications for practitioners. Tobacco companies need to focus continued effort on developing further supplier relationships to improve sustainability performance beyond compliance with regulatory requirements. It is evident that managing reputational risk exposure and complying with existing regulatory requirements have played a significant role in the case company's SRM. However, the main motivation for a supplier to engage the sustainability implementation also appears to comply with the buyer's requirement, not to improve its own sustainability performance. The awareness of this may help a tobacco manufacturer have a proper evaluation of the extent of sustainability development efforts a supplier might require for a win for both the buyer (manufacturer) and the supplier. This may require the training of sustainable SRM principles within the manufacturer's supply management function, and the provision of rewards and incentives in contracts for specific supplier sustainability performance. Furthermore, even given the controversial nature of the

tobacco industry, it is not sufficient that engaging in sustainable SRM is primarily driven by the need to comply with existing regulations or by avoiding reputational risk exposure. Policy makers and trade associations are thus advised to establish sector-specific guidelines and techniques to spread good sustainable SRM practices in the tobacco sector.

While providing a crucial insight into sustainable SRM in the tobacco industry, this study has been conducted through a single case study. This brings with it some limitations particularly in terms of the generalisability of the results. There is thus a need for further research to be conducted within this sector. Providing further insights into cost-effective strategies in implementing sustainable SRM will also contribute to a desire for the whole industry to be adopting SSCM practices (beyond the minimum acceptable compliance with existing regulations). Also, this research has examined sustainable SRM only from a focal company perspective, without taking the supplier perspective into account. Further research should first explore both the supplier and the buyer points of view on sustainable SRM, and then encompass the whole supply chain. Moreover, further research could investigate the development of sustainable SRM over time using a longitudinal study, in particular in the light of changing regulations, specific industry incidents and relationship dynamics. While this study is based on a specific, extremely exposed (tobacco) industry, our findings also seem to be relevant to those industries that risk being under comparable pressure, such as the food industry that is linked to obesity and diabetes, and the telecommunications industry that is threatened by the potential link between cancer and the use of mobile phones (Palazzo and Richer, 2005). Therefore, we hope that this research could stimulate further empirical and theoretical work into SSCM in such industries as tobacco, which are subject to stringent regulations.

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Participant Title	Participant Code
Head of Procurement	1
Global Category Manager	2
Global Category Manager	3
Group Head of NPI Deployment	4
Global Sourcing Manager	5
Global Category Manager	6
Procurement Business Manager	7
Global Category Manager	8
Senior International Sustainability Manager	9
Group Head of Procurement Strategy & Planning	10
Head of Procurement – Western Europe	11
Global Head of Direct Procurement	12
Head of Procurement Account Manager	13

Table 1. List of participants in the research

Research Theme	Participant Code													Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	
Perception and motivation of sustainability initiatives in SRM														
Supplier selection as a process of eliminating supplier sustainability risk	1	1	1	1	1	1	1	1			1	1	1	11
Sustainability is mainly to meet ethical standards	1	1	1			1	1	1		1	1	1		9
Risk assessment and sustainability performance	1			1		1			1					4
Top management commitment to sustainable SRM practices				1					1	1	1			4
Sustainability requirements increase cost		1												1
Supplier segmentation and multi-tier supplier management in pursuit of sustainability														
Supplier segmentation and relationship management	1	1	1	1	1	1				1	1	1	1	10
Traceability and multi-tier sustainability performance	1					1				1	1			4
Supplier relationships beyond tier 1				1	1		1		1		1		1	6
Sustainability performance management in SRM														
Incentives and penalties for sustainability development						1			1					2
Supplier audit (site visits and assessment) and sustainability performance	1	1		1		1	1	1	1					7
A leaf supplier's sustainability management is more robust than a non-leaf supplier's.				1					1					2
Contract management and sustainability performance						1								1
Supplier sustainability reporting beyond tier 1 and sustainability performance				1			1		1	1		1		5
The code of conduct is a benchmark for sustainability performance		1	1			1			1			1	1	6
Supplier performance monitoring and reporting (via 3rd party)	1			1		1	1		1	1	1			7
Sustainability specific KPIs and sustainability performance		1				1						1		3
Supplier development for sustainability performance improvement														
Training and vendor development for sustainability development	1			1	1			1	1	1	1	1	1	9
Supply base revalidation and sustainability development initiatives			1											1
Supplier non-conformance and sustainability development	1	1		1		1		1	1			1	1	8

Table 2. Summary of research findings